CERTIFICATE OF TRANSMISSION BY FACSIMILE (37CFR1.8)

Docket No. IEN-10-5715-D1 (CA920010028US2)

Applicant(s): Boyaud et al.

Serial No.

Filing Date

Art Unit Group

10/681,513

October 8, 2003

2811

TITLE:

TRANSFER MOLDING OF INTEGRATED CIRCUIT PACKAGES

I hereby certify that this REQUEST FOR CORRECTION OF A FILING RECEIPT AND SUPPORTING DOCUMENTS

(Identify type of correspondence)

are being facsimile transmitted to the United States Patent and Trademark Office

Fax. No. 703-746-9195

on

February 4, 2004
(Date)

Alicia Keck

Micin & Kent

(Typed or Printed Name of Person Signing Certificate)

(Signature)

CERTIFICATE OF MAILING

I hereby certify that this document is being deposited with the U.S. Postal Service, with sufficient postage, as first class mail in an envelope addressed to U.S. Patents and Trademarks Offices, Application Processing Division's Customer Correction Branch, Washington, D.C. 20231, on this 4 day of EDOCOMA, 2004.

Micia & Keck | Alica Keck

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re a	pplication of: Boyaud et al.)
Serial :	No.: 10/681,513) Art Unit 2811
Filed:	October 8, 2003)
For:	TRANSFER MOLDING OF INTEGRATED CIRCUIT PACKAGES))

Attorney Docket No.: IEN-10-5163-D5 (EN9-92-080-XB)

ASSISTANT COMMISSIONER FOR PATENTS
Office of Initial Patent Examination's
Filing Receipts Corrections
Alexandria, VA 22313-1450

REQUEST FOR CORRECTION OF A FILING RECEIPT

Sir:

Enclosed is a copy of the original Filing Receipt issued by the U.S. Patent Office for the above-identified Patent Application. Due to an inaccurate identification of the title for the subject application, it is requested that the Filing Receipt be revised as follows:

Change the title to read as follows:

TRANSFER MOLDING OF INTEGRATED CIRCUIT PACKAGES

In support of this request, Applicants are also submitting a copy of the first page of the aforementioned application and a copy of the Declaration and Power of Attorney which was filed in the parent application. These documents show the correct title as it appeared in the original case and which should also be used in this divisional application.

It is believed that there are no additional fees for this correction; however if that is not the case, please charge any fees associated herewith to Deposit Account No. 09-0457.

Respectfully submitted,

Dated: 2-3-04

William N. Hogg (Reg. No. 20,156)

Driggs, Lucas, Brubaker/& Hogg CO., L.P.A.

8522 East Avenue Mentor, Ohio 44060 (440) 205-3600

Fax: 440 205 3601

E-mail: bill@driggslaw.com

WNH/ayk

Enclosures



United States Patent and Trademark Office

UNITED STATES DEPARTMENT OF COMMERCE United States Posent and Tradignack Office Addres COMMISSIONER FOR PATENTS P.C. DOX 1450 Alexandria, Vocation 22313-1450 unite defaults

IND CLMS DRAWINGS TOT CLMS ATTY. DOCKET NO FILING OR 371 FIL FEE REC'D ART UNIT APPL NO. (c) DATE 3 17 CA920010028US2 (IEN-10-57 770 2811 10/08/2003 10/681.513

CONFIRMATION NO. 9654

000026681 DRIGGS, LUCAS BRUBAKER & HOGG CO. L.P.A. DEPT. IEN 8522 EAST AVENUE MENTOR, OH 44060

FILING RECEIPT *OC000000011605988*

Date Mailed: 01/02/2004

Receipt is acknowledged of this regular Patent Application. It will be considered in its order and you will be notified as to the results of the examination. Be sure to provide the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION when inquiring about this application. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please write to the Office of Initial Patent Examination's Filing Receipt Corrections, facsimile number 703-746-9195. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections (if appropriate).

Applicant(s)

Marie-France Boyaud, Bromont, CANADA; Catherine Dufort, Bromont, CANADA; Marie-Claude Paquet, Bromont, CANADA; Real Tetreault, Granby, CANADA;

Assignment For Published Patent Application

International Business Machines Corporation, Armonk, NY;

Domestic Priority data as claimed by applicant

This application is a DIV of 10/167,635 06/12/2002 PAT 6,656,773

Foreign Applications

CANADA 2,350,747 06/15/2001

If Required, Foreign Filing License Granted: 01/02/2004

Projected Publication Date: 04/15/2004

Non-Publication Request: No

Early Publication Request: No

l	a minarina 12 C4
١	Office Communication
	Additional Date/Subject for Docket
	CATION OF DATES:

Title

molding

Transfer holding of integrated circuit packages

Preliminary Class

257

LICENSE FOR FOREIGN FILING UNDER Title 35, United States Code, Section 184 Title 37, Code of Federal Regulations, 5.11 & 5.15

GRANTED

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been grant d under 37 CFR 5.13 or 5.14.

This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Office of Export Administration, Department of Commerce (15 CFR 370.10 (j)); the Office of Foreign Assets Control, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

10

15

20

IMPROVED TRANSFER MOLDING OF INTEGRATED CIRCUIT PACKAGES

CROSS-REFERENCE TO RELATED APPLICATION

This application is a divisional of application serial No.10/167,635, filed June 12,

2002, now Patent No. ______.

FIELD OF THE INVENTION

This invention relates to an improved method of the use of transfer molding for encapsulating and underfilling integrated circuit chips attached to substrates to result in integrated circuit packages. It also relates to the mold and apparatus used in the improved method and the resultant integrated circuit assemblies.

BACKGROUND OF THE INVENTION

An integrated circuit chip assembly generally comprises an integrated circuit chip attached to a substrate, typically a chip carrier or a circuit board. The most commonly used integrated circuit chip is composed primarily of silicon having a coefficient of thermal expansion of about 2 to 4 ppm/° C. The chip carrier or circuit board is typically composed of either a ceramic material having a coefficient of thermal expansion of about 6 ppm/° C., or an organic material, possibly reinforced with organic or inorganic particles or fibers, having a coefficient of thermal expansion in the range of about 6 to 50 ppm/° C. One technique well known in the art for interconnecting integrated circuit chips and substrates is flip chip bonding. In flip chip bonding, a pattern of solder balls is formed on the active surface of the integrated circuit chip, allowing complete or partial population of

CA920010028US2 (IEN-10-5715-D1)